

Inside Healthcare Computing

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1990, 1996, 1997, 1998, 2002

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Customer service:

(800) 294-6032

customer.service@insideinfo.com

IHC Electronic Library:

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Editor Suzanne Corrales:

suzanne.corrales@insideinfo.com

Usernames and Passwords:

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Another IHC Scoop Comes To Pass: HIMSS Buying Dorenfest for \$6 Million

As we had predicted months ago (*IHC*, 2/23/04), the Healthcare Information and Management Systems Society (HIMSS) has signed to acquire the Dorenfest Database. The price was \$6 million, said HIMSS spokeswoman Joyce Lofstrom.

The database will be a foundation for a new subsidiary that will offer market research to healthcare organizations. Also as we'd predicted, David E. Garets, formerly of Gartner Group, is president and CEO of the new service, which will be called "HIMSS Analytics."

What EMR Vendors Are Charging

Most big HIS vendors strangely guard their contract prices as if they were the secret rules for torturing CIOs.

That's not the case for electronic medical record systems for MDs. For at least the smaller systems, prices of many electronic medical record systems are available with a small amount of digging on vendor web sites, in chat groups, and in published reports.

In general, the biggest vendors, like HIS vendors, don't disclose their EMR prices. Epic and Misys are the exceptions. But knowing what the competition charges can give you an edge at the negotiating table.

These prices come from multiple vendors through Mark Anderson, healthcare IT futurist and principal of the AC Group, Texas. They are a small (See 'EMR,' page 7.)

McKesson, Siemens, Eclipsys All On The Standard Cerner Rebuked For Lagging On Arden Syntax

The co-chair of the HL7 Committee on Arden Syntax

(continued on next page)

says Cerner Corp. has not implemented a standard version of Arden Syntax in its products.

“It is an area of concern,” said R. Matthew Sailors, an adjunct assistant professor in the department of health informatics at the University of Texas Houston Health Sciences Center.

Arden Syntax is used to encode medical knowledge. It is used in medical decision-making and decision support rules. Dosing recommendations, clinical protocols, and contra-indications are all examples of data that can be configured according to Arden Syntax.

Old version can't share decision rules

Dr. Sailors said Cerner implemented a non-standard version years ago, and has stuck with it ever since. As a consequence, physicians from Cerner sites will find it difficult to share decision support rules with others. Siemens, McKesson, and Eclipsys all use standard versions, he said.

Dr. Sailors said he has tried and failed to get a clear answer on Cerner's plan for getting current on the standard syntax.

Since he said he couldn't get an answer, we contacted Cerner about his concern, first on May 24, 2004. On June 3, we e-mailed our questions. This is a slightly edited version of what we asked:

1. Cerner sends representatives to other HL7 committees, why not decision support?
2. Why has Cerner apparently stopped participating in the decision support standards process?
3. Does Cerner have a current plan to move to a more modern version of Arden Syntax? If so, when? If not, why not?

We did not hear back from Cerner in time to meet our deadline for this issue.

MDs Debate What Belongs On Patient Wristbands

Questions about what belongs on a patient wristband are heating up, as more hospitals redesign their wristbands to accommodate bar code readers.

In many systems, the encoded number is the data element that retrieves the record from the electronic system. Many organizations encode just the medical record number. However some MDs, posting comments on a chat board recently, pointed out that the medical record number does not expire but an encounter number can. That could be useful for identifying patients who no longer belong in the hospital.

The encounter number could serve a second purpose. JCAHO requires two patient identifiers. Nothing says that one can't be bar-code-readable and the other human-readable, wrote Steven J. Davidson, MD, chair of the ER department at Maimonides Medical Center, New York City.

The human-readable part be a cross-check on the machine-readable portion.

However, if mishandled, it can pose patient security concerns. Most MDs seem uncomfortable about the thought of putting patient social security number or mothers' maiden names on the wristband.

There are other issues as well. The longer the barcode, the longer the string of wireless data you send. In some systems, that might degrade system performance. Also, there's only so much data you can cram on a wristband and still leave enough room for a barcode. For example: should

the hospital's name go on the wristband?

Seeking quick answers, we contacted Bridge Medical, a leader in bar-coded medication system sales. Bridge requires that patient record numbers be encoded, and says the rest is pretty much up to the organization. Most new Bridge clients continue doing whatever they did before, said Mike Issac, VP customer service.

Here's what MDs said:

Patricia L. Hale, MD, who is CMIO at Glens Falls, N.Y., Hospital: the hospital barcodes the medical record number. The human-readable portion is patient name, date of birth and gender.

She added that she welcomes suggestions from other organizations which are further down the road.

Clement McDonald, MD, director of the Regenstrief Institute: In a perfect world, the bar code would encode hospital chart number, name, birth date, gender, race, and mother's maiden name.

Other information that may be useful: an indicator of patient status (inpatient/outpatient) and the name of the institution. "The answer, of course, depends on how much storage space you have in the bar code." He notes that a two-dimensional barcode reader is useful in that regard.

Jonathan Silverstein, MD, director for clinical information, University of Chicago: Encoded information -- Medical record number, gender, date of birth. Human-readable information--name, medical record number, gender and date of birth. "Patients should be encouraged to check their own information," he said. (Dr. Silverstein warns that his opinions are based on "no data.")

Dr. Davidson: Maimonides prints bar-coded wrist bands only in Emergency. Hospital name, patient number, medical record number, date of birth, date of service, and encounter number are written in text. Only the medical record number is coded.

Nobody asked our opinion, but here's a question: why not make wristbands bigger?

Centura Created Its Own Approach To Clinical Systems Selection

(Editor's note: in our last issue, we told how three-hospital Community Foundation of Northwest Indiana used an alternative to the standard RFP approach for the difficult task of selecting the right information system. Here's another alternative.)

Colorado's biggest health system, 11-hospital Centura Health, Englewood, is close to announcing some big news: its contract for a new suite of clinical systems.

While vendor finalists squirm over who will win the deal, a question that can be now answered is "How" – what it takes to get to a sensible decision on a system that every caregiver has to use, and which will live or die on the basis of clinician support.

Here's how Centura has gone about it, starting 2-1/2 years ago, according to Karen Romero, VP clinical technology (We took in her recent HIMSS teleconference and interviewed her afterward.).

Centura used a meticulous process that included careful development of organizational visions and before-the-fact changes in work processes. You won't find this approach at any consulting web sites because Centura created it.

Centura pulled 25 clinical leaders into a

two-day retreat, and studied “business drivers” that affect clinical operations. With business needs in mind, they agreed on a brief statement of their clinical vision. That led to a clinical information technology vision. Then they did detailed needs assessments. They analyzed and developed revisions to work processes. They identified key goals for bringing work processes in line with the clinical vision.

Does this sound esoteric -- and possibly like a big waste of time -- to you? It did Centura clinicians, too: many asked “Can’t we just go pick a system and put it in?”

(Editor’s note: again we see a lesson illustrated by a failure elsewhere. This seems simple in hindsight: you need to focus on clinicians’ work processes. However, it’s a struggle to get them to tell you.

We’d had reported before that computerized physician order entry, the core of a new in-house clinical information system at Cedars Sinai Medical Center, worked as technology, but interfered with work processes, which was blamed as a key reason MDs rebelled against it.

Management at Cedars was not unaware of work flow. It had tried to get non-IT-oriented physicians involved in development but wasn’t successful, probably because Cedars doesn’t pay MDs for committee work, and MDs who want to focus on beating diseases didn’t want to be on a boring clinical IT committee.)

Because the Centura process began with, “What are our business drivers?”, it built organizational energy and trickled down into some fairly detailed needs assessments that helped prevent MDs from “losing focus” in the face of vendor demos.

(She didn’t say exactly what “business drivers” means, but from the context, it seems evident: everything that affects whether you and MDs make money, and

how much--including, of course, quality of clinical results: nothing drives away patient business faster than the perception that the hospital is a mistake-prone menace to life and limb.)

A few approaches that worked well for Centura::

- **Organization-wide buy-in.** How do you know whether you have achieved it? Ms. Romano offers this useful measure: is the organization willing to take key clinicians away from treating patients during working hours, or else pay them extra, so that they can participate in system design?

- **A modular implementation approach.** Break your project down into “repeatable initiatives” such as bringing one nursing unit live on your system. At each step, measure your results. If they are good, publicize them widely, if they are poor, share them with your steering committee, so they can be used to fix problems and make subsequent roll-outs go smoothly.

- **Accept “Good, not perfect.”** For most hospitals, making a systems rollout work well, but moving on to the next one before it is perfect, is a tough but necessary adjustment.

Centura dealt extensively with analysis of organizational workflow -- a term so tossed around that it’s become room noise in a lot of presentations. Ms. Romano says the term has these three distinct meanings:

1. The series of steps it takes to get a patient admitted, treated and discharged.

In a pre-implementation exercise, Centura entirely re-designed its meds administration workflow to remove unneeded “moving parts,” then began standardizing all

its hospitals on the new way to do things. This was done with completely manual systems, but having workflow freshly redesigned first has helped clinicians to know exactly what they will need from their information systems.

2. Workflow is also the series of screens within a vendor product that approximates the order in which things are actually accomplished in a hospital.

3. Finally, workflow is the thing embedded in a “workflow engine” which brings together elements within a system to manage the life cycle of a process, from definition through deployment, execution, and measurement.

Some vendors, such as Siemens, are incorporating the capabilities of industry-standard workflow engines in new systems that they are building from the ground up. Others are modifying existing applications to give them workflow-like capabilities, she said. It remains to be seen which approach better serves healthcare IT.

Misys Takes An EC7000 (TDS) Client Away From Eclipsys

How did a relatively unsung vendor like Misys earn second place for inpatient clinical systems in the recent TEPR meeting? It didn't surprise Joe Palombit.

In fact, as CIO of Pascack Valley Hospital, 291 beds, Westwood, N.J., he'd probably tell you that Misys should have been first. His shop is leaving an older Eclipsys system for Misys.

Pascack Valley's selection process was the traditional approach in most ways: a selection team with subcommittees, RFPs, demos, and site visits. The winnowing and

selection were done by vote. Selection committees from Pascack studied options for two years before concluding that, for most of its users, a Per Se (now Misys) system was head and shoulders above the competition. The selection process was prolonged because Per-Se sold its Patient1 suite to Misys, which markets it as Misys CPR and Misys CPOE.

If Misys clinicals are so all-fired great, then why are so many organizations licensing Cerner and Eclipsys?

“We kept asking ourselves the same question,” he said. His best guess: the system has been around for a long while and it is not widely installed, so people assume there is something amiss with it. “It's like the world's best programmer who can't get a job because he's never had one.” Also, in his opinion, it is not well marketed. “They have a very weak sales force.”

Pascack's plan to upgrade was driven mainly by a need for better systems integration and a desire to address medication errors with decision support without giving up too much on the response times users had with Eclipsys (formerly TDS).

Misys can match EC7000 on response time, but Pascack's plan to add decision support is likely to slow it down, he said. Pascack saw “acceptable” system performance on a site visit to Arnot-Ogden, which uses both off-the-shelf and customized decision support. Pascack already enjoys 40% physician order entry. With Misys, the target is 100%.

From RFP design, to demo and site visit protocols, through the final contract, Pascack was advised by Kurt Salmon & Associates. Project head was longtime HIS consultant Elaine Remmlinger. Mr. Palombit

speaks of the firm with a warmth and respect that is rare between CIOs and consulting firms. "I cannot tell you how much help they have been."

Pascack created task forces representing physicians, nursing, ancillary systems, financials, and registration; each had 10-15 members, plus a steering committee. Pascack didn't pay the MD members extra.

The RFP drew seven responses, which were whittled down to these five by the steering committee: Cerner, Eclipsys, Per-Se (now Misys), IDX, and Meditech.

Pascack invited each vendor to hold two simultaneous day-long series of one-hour demos. The idea was to give each user task force and the steering committee a chance to evaluate the products on their own terms and convenience.

For example MD demos were scheduled for 7 a.m. and noon. Everyone was welcome, even if they could only stay for 20 minutes, he said. The only rule was that if you showed up, you had to vote. The net of it: "We involved actual hands-on end users" in the selection process.

A second round of demos was a clinicians-only affair. MDs and nurses were invited to sit down at PCs and test the systems with dummy orders. Only about 15 participated, but the group did include some of Pascack's heaviest admitters.

Tips to boost dollar-value of site visits

Site visits followed. Here are two things Pascack to make the trips worth the money:

- It made them less expensive, saving on air fares by piling key selection team members into cars and driving. (The drive to

Arnot-Ogen, in Elmira, N.Y., just 245 or so freeway miles away, is probably also faster by car, given today's airport security delays.)

- It barred vendor sales people from attending. Salesmen met Pascack teams at each site, made introductions, and then cleared out, and didn't return until 2 p.m. Each site was asked to prepare a 45-minute PowerPoint presentation that introduced the site and gave the basics of the implementation. Team members then peeled off for sessions with their hospital counterparts. A nurse could walk up to a person putting in an order and ask "how do you find the system?" Everybody lunched together.

Pluses and minuses of each vendor

In the end, every vendor showed some strengths and some weaknesses:

- **Per-Se/Misys** was the favorite of physicians, nursing, and pharmacy, who found it "easiest to learn and use." Misys doesn't have patient financials.

- **Eclipsys SunriseXA** was second choice for nurses and MDs, and was liked better by financial staff; Pascack already runs interfaced Eclipsys Financial Access (SDK).

- **Meditech:** Pascack financial people favored it because it has an all-integrated platform. That was a big plus because Pascack has had difficulty with information drops across the E-Link interface engine to Cerner lab and, especially Cerner pharmacy. However, the medical staff, accustomed to the flexibility of EC7000, found Meditech too rigid.

- **IDX** came in third with MDs and nursing, but was popular with ancillary departments. Also, IDX prices seemed high to Pascack.

- **Cerner** didn't do well in the final tally with Pascack, despite the fact that it runs Cerner Classic Lab and Pharmacy, and lab representatives on the Pascack ancillary team initially strongly favored Cerner. Cerner and IDX were "very close" on clinician ratings, However, Cerner didn't do well on Pascack's reference checks. Cerner has financials live, but at only a couple of sites.

Medication Errors As A Rationale For CPOE: IT Execs, MDs Fire Back

On May 23, we sent an e-mail to non-subscribers (and possibly some readers) offering access to a copy of a commentary, **"Before Your Organization Spends Millions On CPOE ... An Analysis Of the Medication Errors Numbers"**

This commentary argues that based on reported medication error rates and their sources, the goal of reducing medication errors, by itself, can't come close to cost-justifying the expense of a CPOE system. (It does acknowledge, of course, that there are other reasons for CPOE.)

The commentary is an updated and rewritten version of one we sent by e-mail to electronic subscribers late last year. We invited these visitors to respond, either for attribution or otherwise.

To date, over 1,000 people have read that commentary (or at least loaded it into their browsers), making it the most widely read page in a few-days span ever at our web site.

The most common response has been the somewhat-less-than-gratifying "Remove me from your mailing list," which we attribute to that utterly human desire not to be confused by the facts.

However, several readers of the commentary did take the time to write thoughtful responses, about half agreeing, half disagreeing. We think these responses are useful, and we plan to publish them in an upcoming issue as part of our ongoing coverage of clinical information systems.

We invite subscribers to read this commentary as well, and, if you wish, to respond. We will not publish your name without your express permission. We do reserve the right to quote from responses without identifying the source. The commentary is at this Web location: <http://www.insidehealth.com/articles/medication.errors.commentary.html>

EMR Prices...continued from Page 1:

slice of Mr. Anderson's comprehensive annual evaluation EMR systems and vendors. They are all-inclusive and provide for hardware, database servers, networking, training and implementation, annual support fees, and a number of smaller installation considerations. Prices are per MD:

- More than \$20,000: DR Notes, Epic, Alteer.
- \$12,501-\$17,999: OmniMD, Greenway, Meridian EMR.
- \$10,000-\$12,500: Imedica, NextGen, Misys, Bond Medical, Axolotl, AllMeds.
- \$7,500-\$9,999: PMSI, MedInfomaticx, Smart Doctor
- \$5,000-\$7,500: SynaMed, eClinicalworks, Medinotes, MedCom Systems, Amicore, JMJ, MD Anywhere, Praxis, Vitalworks.
- Less than \$1,000: Amazing Charts

Participating vendors completed a 5,155-item functionality questionnaire in four areas: desktop capability, wireless capability, remote access capability and PDA and

mobile capability. He then independently verified performance of systems that ranked in the top ten in self-reported functionality.

Epic: high price, middle on functionality

A few observations:

- When it comes to EMR functionality, you don't necessarily get what you pay for. Epic Systems, one of the higher priced options, ranks seventh in functionality. Third-ranked SynaMed is among the lowest-priced. On the other hand, as a group, EMR vendors are notoriously unstable, and Epic seems pretty clearly here to stay.

- In 2002, 2003 and 2004, NextGen and AllScripts ranked in the top three in functionality. Both are available for large practices.

- In 2003, half a dozen vendors announced plans to significantly improve functionality, as measured by Mr. Anderson's scoring system. Only one, Greenway,

actually met or exceeded its own predictions. Greenway predicted a modest 5% increase in functionality scores and actually achieved a 6.5% increase. Two others came close. JMJ made big strides that fell just short of what it had predicted: its 37% increase in functionality missed its mark by only 2.7%. Cliniflow promised a 24% improvement and achieved 20%. MdAnywhere and eMDS also predicted significant improvement, but elected against participating in the 2004 study.

- Many vendors' scores decreased between 2003 and 2004. Reason: Mr. Anderson added 1,000 functionality questions, and increased weight for questions dealing with clinical decision support, template design, formulary compliance, SNOMED nomenclature, and clinical knowledge base.

The full 160-page report is available from Mr. Anderson, (281) 413-5572, or by email at mra@acgroup.org. Price is \$129 for providers, \$249 for vendors.

Systems for 50-149 Physicians			Systems for Practices Of 150+ MDs		
Vendor	Desktop*	Overall Score***	Vendor	Functionality*	Overall Score***
1. NextGen	96.8%	37	1. NextGen	96.8%	37
2. Allscripts	91.0%	37	2. Allscripts	91.0%	37
3. SynaMed	89.7%	24	3. SynaMed	89.7%	24
4. Bond Medical	88.2%	23	4. Imedica	86.7%	26
5. Imedica	86.7%	26	5. MedCom	80.9%	24
6. MedCom	80.9%	24	6. PMSI***	77.6%	26
7. eClinicalworks	80.1%	29	7. Epic	77.3%	28
8. PMSI	77.6%	27	8. GE Medical	70.6%	29
9. Meridian EMR	75.5%	15			
10. MedInformatix	75.1%	25			
11. A4 Healthcare	73.5%	28			
12. GE Medical	70.6%	29			

* Desktop functionality
 ** Physician Micro Systems, Inc.
 *** takes into account vendor size, customer satisfaction, price and functionality

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